

**REMARKS/ARGUMENTS**

Claims 1-18 are currently pending in this application. The Examiner has rejected claims 5-12 and 15-18 under 35 U.S.C. §112. The Examiner has rejected claims 1, 5, 9, 13, 15 and 17 under 35 U.S.C. §102. The Examiner has rejected claims 2-4, 6-8, 10-12, 14, 16, and 18 under 35 U.S.C. §103. In the present reply, the Applicants have canceled claims 9-12 and 17-18 without prejudice and reserve the right to prosecute the canceled claims in a continuation application, divisional application, or other filing. The Applicants have amended claims 1, 5, 13 and 15 to more particularly and distinctly claim the subject matter regarded as the invention. All claim amendments are fully supported in the specification and/or drawings and no new matter is being introduced by the amendments.

**Double Patenting – Obviousness-type**

The Examiner rejected claims 1-18 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of various copending Applications.

The Applicants are willing to submit a terminal disclaimer to overcome the rejections over the claims of the Applications the Examiner cited, if the Examiner believes the Application is otherwise allowable.

**35 U.S.C. §112**

The Examiner rejected claims 5-12 and 15-18 under 35 U.S.C. §112 first paragraph. The Applicants have canceled claims 9-12 and 17-18, and have amended independent claims 5 and 15 to more particularly and distinctly claim the subject matter regarded as the invention. The Applicants respectfully request that the Examiner withdraw the 35 U.S.C. §112 rejection.

**35 U.S.C. §102(e)**

**Claims 1, 5, and 9**

The Examiner rejected claims 1, 5, and 9 under 35 U.S.C. §102(e) as being anticipated by Ylitalo et al. (U.S. Reference No. 6,788,661).

The Ylitalo reference discloses an adaptive beam-time coding method and apparatus where a diversity encoder (10) receives an input signal ( $S_{IN}$ ) which contains a first symbol ( $S_1$ ) and a second symbol ( $S_2$ ). The diversity encoder performs an operation on both symbols and outputs  $S_1$  and  $-S_2^*$  onto a first channel ( $CH_1$ ) into a complex multiplier (12) and  $S_2$  and  $S_1^*$  onto a second channel ( $CH_2$ ) into a complex multiplier (14), which then impart a different spread spectrum code. In the Ylitalo reference, all input signals first go through a diversity encoder where an operation is performed prior to forwarding to the complex multipliers.

There is no disclosure, suggestion, or teaching in the Ylitalo reference that a data field is input into a channelization device or spread with a channelization code without having first been through a diversity encoder as is the case for the data field being spread by the first channelization code in the Applicants' claimed invention as claimed in amended independent claims 1 and 5. Furthermore, there is no disclosure, teaching or suggestion in the Ylitalo reference that a first channelization code that spreads a data field is *uniquely* associated with a first antenna and a second channelization code that spreads a data field is *uniquely* associated with a second antenna, as is recited in the Applicants' invention as claimed in amended independent claims 1 and 5.

Accordingly, the Applicants' invention as claimed in amended independent claims 1 and 5 is patentable over the Ylitalo reference.

Claims 13, 15, and 17

The Examiner rejected claims 13, 15, and 17 under 35 U.S.C. §102(e) as being anticipated by Dabak et al. (U.S. Reference No. 6,594,473).

The Dabak reference discloses spreading data on more than one antenna using the *same* walsh code. Referring to Figure 4 of Dabak, Walsh code one ( $W_1$ ) is used to spread the data transmitted on both antenna one *and* antenna two. Walsh code two ( $W_2$ ) is used to spread the data transmitted on both antenna three *and*

antenna four. There is no disclosure, teaching, or suggestion that any different channelization code is used on the symbols in the Dabak reference. Furthermore, there is no disclosure, teaching, or suggestion in the Dabak reference of any channelization code being uniquely associated with a particular antenna.

Accordingly, the Applicants' invention as claimed in amended independent claims 13 and 15 is patentable over the Dabak reference.

**35 U.S.C. §103(a)**

**Claims 2-4, 6-8, and 10-12**

The Examiner rejected claims 2-4, 6-8, and 10-12 as being unpatentable over Ylitalo in view of Akiba et al. (U.S. Ref. No. 6,721,300).

The Akiba reference discloses an encoding method and diversity transmitter. As with the Ylitalo reference, there is no disclosure, suggestion, or teaching in the Akiba reference that a data field is input into a channelization device or spread with a channelization code without having first been through a diversity encoder as is the case for the data field being spread by the first channelization code in the Applicants' claimed invention as claimed in amended independent claims 1 and 5. Furthermore, there is no disclosure, teaching or suggestion in the Akiba reference that a first channelization code that spreads a data field is *uniquely* associated with a first antenna and a second channelization code that spreads a data field is

*uniquely* associated with a second antenna, as is recited in the Applicants' invention as claimed in amended independent claims 1 and 5.

Accordingly, the Akiba reference fails to cure the deficiencies of the Ylitalo reference, and the Applicants' invention as claimed in amended independent claims 1 and 5 is patentable over the Ylitalo and Akiba references, whether taken alone or in combination with one another.

Claims 2-4 depend, either directly or indirectly from the Applicants' patentable independent claim 1 and are therefore patentable for at least the same reasons as patentable amended independent claim 1.

Furthermore, claim 2 recites "scrambling said first and second spread data fields by a scrambling code associated with said base station" which is not disclosed, taught or suggested by the Ylitalo or Akiba references taken alone or in combination with one another. Therefore, claim 2 is patentable for this reason as well as its dependence from patentable amended independent claim 1.

Claims 6-8 depend, either directly or indirectly from the Applicants' patentable independent claim 5 and are therefore patentable for at least the same reasons as patentable amended independent claim 5.

Furthermore, claim 6 recites "a first and second scrambling device for scrambling said first and second spread data fields by a single scrambling code associated with said transmitter " which is not disclosed, taught or suggested by the

Ylitalo or Akiba references taken alone or in combination with one another. Therefore, claim 6 is patentable for this reason as well as its dependence from patentable amended independent claim 5.

Claims 14, 16, and 18

The Examiner rejected claims 14, 16, and 18 under 35 U.S.C. §103(a) as being unpatentable over Dabak in view of Akiba.

As previously, discussed, the Applicants' invention as claimed in amended independent claims 13 and 15 is patentable over the Dabak reference. Furthermore, the Akiba reference fails to cure the deficiencies of the present invention. Accordingly, the Applicants' invention as claimed in amended independent claim 13 is patentable over the Dabak and Akiba references, whether taken alone or in combination with one another.

Since claim 14 depends from the Applicants' patentable independent claim 13, it is therefore patentable for at least the same reasons as patentable amended independent claim 13.

Furthermore, claim 14 recites "scrambling said first and second spread data fields by a scrambling code associated with said transmitter" which is not disclosed, taught or suggested by the Dabak or Akiba references taken alone or in combination

with one another. Therefore, claim 14 is patentable for this reason as well as its dependence from patentable amended independent claim 13.

Since claim 16 depends from the Applicants' patentable independent claim 15, it is therefore patentable for at least the same reasons as patentable amended independent claim 15.

Furthermore, claim 16 recites "a first and second scrambling device for scrambling said first and second spread data fields by a single scrambling code associated with said transmitter" which is not disclosed, taught or suggested by the Dabak or Akiba references taken alone or in combination with one another. Therefore, claim 16 is patentable for this reason as well as its dependence from patentable amended independent claim 15.

**Applicant:** Kim et al.  
**Application No.:** 10/079,107

**Conclusion**

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the Applicants' undersigned attorney by telephone at the Examiner's convenience.

In view of the foregoing remarks and amendments, the Applicants respectfully submit that the present application, including claims 1-8 and 13-16, is in condition for allowance and a notice to that effect is respectfully solicited.

Respectfully submitted,

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